

## SAFETY INSTRUCTIONS

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1. Please read these safety instructions carefully.
2. Please keep this User's Manual for your reference.
3. Please disconnect the equipment from your AC outlet before cleaning.  
Do not use liquid or sprayed detergent for cleaning.  
Use moist sheet or cloth for cleaning.
4. For pluggable equipment, the socket-outlet shall be installed near the equipment and shall be easily accessible.
5. Please keep this equipment away from humid areas.
6. Install this equipment on a reliable surface. If the equipment is not on a reliable surface, it may drop and cause injury.
7. The openings on the enclosure are for air convection. Please protect the equipment from overheating . **DO NOT COVER THE OPENINGS.**
8. Make sure the voltage of the power source is appropriate when connecting the equipment to the power outlet.
9. Place the power cord where people will not step or trip on it. Do not place objects over the power cord.
10. All Cautions and Warnings on the equipment should be noted.
11. If the equipment is not in use for several days, disconnect the equipment from the power outlets to avoid damage by transient power surges.
12. Never pour any liquids into the openings, this could cause fire or electrical shock.
13. Never open the equipment. For safety reasons, the equipment should only be opened by qualified service personnel.
14. If one of the following situations arises, get the equipment checked by a service personnel:
  - (a) The power cord or plug is damaged.
  - (b) Liquid has penetrated into the equipment.
  - (c) The equipment has been exposed to moisture.
  - (d) The equipment has not worked well or you can not get it to work according to the user's manual.
  - (e) The equipment was dropped and damaged.
  - (f) If the equipment has obvious signs of damage.
15. **DO NOT LEAVE THIS EQUIPMENT IN AN ENVIRONMENT UNCONDITIONED; STORAGE TEMPERATURE ABOVE 60°C (140°F), IT MAY DAMAGE THE EQUIPMENT.** The sound pressure level at the operators position according to IEC704-1:1982 is equal or less than 70dB(A)
16. **DANGER: Invisible laser radiation when opened. Avoid direct exposure to beam.**  
Complies with FDA radiation performance standards, 21 CFR, subchapter J.  
Laser power: Wave Length: 783±3nm (CD); 658±3nm (DVD)  
Emission power: 0.7mW  
Laser diode: class 3b
17. The power adapters (L.P.S.) can be used for the product are as listing:
  - (a) Asian Power Devices Inc. Type WA-10E05U-AD-S10.
  - (b) Asian Power Devices Inc. Type WA-10E05G-AC-EX0.

## FCC COMPLIANCE STATEMENT

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Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: To assure continued compliance, (example – use only shielded interface cables when connecting to computer or peripheral devices). Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

## PRECAUTIONS

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**!! Do not attempt to open the drive and service it. Removing the cover may cause exposure to harmful laser beams and electrical voltage. User is recommended to get service by returning the defective drive back to the original vendor where the drive was purchased.**

- Use the original package for transporting the drive or sending back for service. The original packing was designed and tested to protect your drive under rough conditions.
- Do not put this drive in direct sunlight, on heating units, or near electrical appliances which draw large amounts of current.
- Use a soft, dust-free cloth for cleaning your drive. Keep your drive away from moisture or liquids including water, cleaning-fluids, or solvents.
- Keep your disc clean. Using a soft, dust-free cloth to clean the surface of the disc before recording will improve the burning data integrity.
- Do not drop or jolt the drive.
- Keep the area around the drive clean from dust, smoke, and other contaminants.
- The copyright law of each country governs the reproduction of copyrighted works. The person using the drives may be liable for its use to make unauthorized copies of copyrighted works.
- It will increase the success rate for copying the data from HDD, instead of copying the data by "copy on the fly mode". Therefore we recommend the user reserving sufficient buffer space for creating an image file (at least 650MB for CD; 5GB for DVD; and if your drive support Double Layer DVD+R or Dual Layer DVD-R writing, then at least 9GB space is needed).

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## INTRODUCTION

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Thank you for purchasing this DVD Writer, a reliable, high-performance recordable DVD and CD writer, rewriter and player. Please read this manual carefully and keep it handy for easy reference. Use the manual for installation, operation and troubleshooting for this drive.

### What the DVD Writer Does

The DVD Writer is a recordable DVD/CD-ReWritable drive that provides professional quality DVD and CD performance for writing, rewriting and reading. It also reads Digital Versatile Discs (DVDs) formatted for movies and data. This versatile and remarkable drive can:

#### For DVDs

- Write DVD+R (recordable DVD) media.
- \* Write Double Layer DVD+R (recordable DVD+R9) media.
- Write DVD+RW (re-writable DVD) media.
- Write DVD-R (recordable DVD) media.
- \*\* Write Dual Layer DVD-R (recordable DVD-R9) media.
- Write DVD-RW (re-writable DVD) media.
- Read DVD (DVD+R, DVD+RW, DVD-R, DVD-RW, DVD-ROM, DVD+R9 and DVD-R9) discs.
- \*\*\* Read or write to DVD-RAM media.

#### For CDs

- Write to CD-R (recordable CD) media.
- Write to ultra-speed CD-RW (rewritable CD) media.
- Read all CD-ROM and CD-R data media.
- Read CD-RW and CD-DA (audio) media.

**(NOTE: The drive's maximum Writing, ReWriting, & Reading speeds are printed on the original box. \*Only when your drive supports Double Layer DVD+R writing, it can write DVD+R9 media. \*\*Only when your drive supports Dual Layer DVD-R writing, it can write DVD-R9 media. \*\*\*Only when your drive supports DVD-RAM reading or rewriting, it can read or write to DVD-RAM media.)**

The drive supports Running OPC (ROPC) and is compatible with Windows Plug & Play. Flash memory allows upgrading the drive to the latest firmware revision (available from the web site) without opening the drive. Buffer Underrun Proof technology eliminates buffer underrun errors, therefore you can safely use your computer for other things while you're writing to a recordable DVD and CD media.

### Format Compatibility

This DVD Writer is a versatile optical disk drive. For CD write function, it is capable to write data, which conforms to Orange Book: Part 2 CD-R Volume 1 / Part 2 CD-R Volume 2 Multi Speed / Part 3 CD-RW Volume 1 (known as Low Speed) / Part 3 CD-RW Volume2: High Speed / Part3 CD-RW Volume 3: Ultra Speed, into CD-R/RW disk in combination with write application software.

For DVD write function, this drive confirms to DVD+R Version 1.3 / DVD+R9 Version 1.0 (only for a Double Layer DVD+R writing support drive) / DVD-R9 Version 3.0 (only for a Dual Layer DVD-R writing support drive) / DVD+RW Version 1.3 / DVD-R Version 2.1 / and DVD-RW Version 1.2, DVD-RAM Version 2.2 (only for a DVD-RAM rewriting support drive)

For read function, it is capable to read all of the following media: DVD single/dual layer (PTP, OTP), DVD-R, DVD+R, DVD+R9, DVD-R9, DVD-RW, DVD+RW, DVD-RAM (only for a DVD-RAM reading support drive).

Besides, it reads all of CD formats and media: CD-DA, CD-ROM, CD-ROM/XA, Photo-CD, Multi-session, Karaoke-CD, Video CD, CD-I FMV, CD Extra, CD Plus, CD-R, and CD-RW.

## Recording Modes

### Track at Once

Data can be recorded to a disc, one track at a time. New tracks can be added later. Music CDs can not be played in a CD player or CD-ROM until the disc is closed.

### Disc at Once

Data can be recorded to an entire disc in one pass. In this mode, new data added later is not allowed.

### Session at Once

Data can be recorded to disc one session at a time. New sessions can be written later in this mode. More disc space can be used because there is no gap between tracks.

### Multi session

Data can be recorded to disc in one session. New sessions can be written later in this mode. Less disc space can be used because a gap is created between sessions.

### Packet Writing

This is useful for data back up. Data can be added directly to tracks on media or can be deleted directly from tracks only on media. To use this mode, your software must support Packet writing function.

## What You Can Do with the DVD Writer

- Record digital video or slide shows onto DVD+R, DVD+RW, DVD-R, and DVD-RW discs.
- \*A Double Layer DVD+R writing support drive will be able to write DVD+R9 disc.
- \*\*A Dual Layer DVD-R writing support drive will be able to write DVD-R9 disc.
- Play DVD+R, DVD+RW, DVD-R, and DVD-RW discs.
- Record data or audio onto recordable or rewritable CD media.
- Play music CDs.
- Play VCD & DVD movies.
- Access interactive reference materials stored on DVD.
- Save photos and other images on recordable or rewritable CDs.
- Archive images and video to DVD or CD.
- Master new software programs on DVD or CD.
- Creating and burning LightScribe-labeled discs.
- \*\*\*A DVD-RAM reading or rewriting support drive will be able to read or write to DVD-RAM disc.

**【Regarding LightScribe disc labeling technology, you may also check the chapter “LightScribe User Guide” for more information.】**

## SYSTEM CONFIGURATION

### System Requirements for USB 1.1

This drive has a high-speed Universal Serial Bus (USB) 2.0 interface. You can also use it with USB version 1.1. To ensure stable read/write/rewrite performance, an IBM compatible PC system with the following features is recommended.

CPU	Pentium 4 1.3GHz or higher with built-in USB 1.1 controller (some USB controllers or motherboards may not support all types of USB devices.)
OS	Microsoft Windows 2000/XP
Memory	Must meet recommended RAM requirements for your operating system. (minimum 256MB is recommended)
CD-ROM Drive	For software installation
Hard Drive	Minimum 650MB available capacity for creating a CD image file; 5GB free HDD space for creating a DVD image file to a Single Layer DVD disc (4.7GB); *and 9GB or above free HDD space for creating a DVD image file to a Double Layer DVD+R disc (8.5GB). (Do not enable HDD thermal calibration during operation)
Interface	USB interface connector

**NOTE:**

- (1) Connecting USB 1.1 interface the drive's top performance is 4X for CD-R, 4X for CD-RW and 6X for reading a CD-ROM. In addition, DVD speed is limited to 0.7X. Therefore, we strongly suggest you NOT to apply any DVD function when connected with USB 1.1 interface.
- (2) Some high-speed hard drives are equipped with an "Auto Thermal Re-calibration" function. Please disable it in the BIOS setup to avoid writing errors (Buffer Under-run).

### Additional Requirements for USB 2.0

Interface	High Speed USB 2.0 interface required to achieve maximum speeds
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**NOTE:**

- (1) High Speed USB 2.0 adapter card is sold separately and will not be bundled in this package.
- (2) To achieve maximum record/write speed your system may require data to be copied first to the computer's hard drive rather than directly from another source disc or drive.

**\*Only specific drives support double-layer and/or dual-layer recording. Refer to your drive's original package.**



## FEATURES AND CONTROLS

### Front View

#### Tray Type Drive

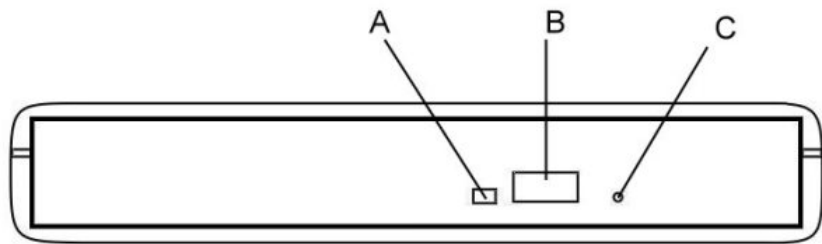


Figure: Front view of tray type drive

<b>A</b>	<b>Busy / Write LED</b>	Indication of drive's operation status. The light lit stands for Busy; the light blinking stands for Write/Rewrite.
<b>B</b>	<b>Eject Button</b>	Push button to eject the tray.
<b>C</b>	<b>Emergency Eject Hole</b>	In case the Eject button isn't working, insert a small stick or paper clip into this hole to eject the tray. <i>Note: Turn off the power before doing this manual ejection.</i>

#### Slot-in Type Drive

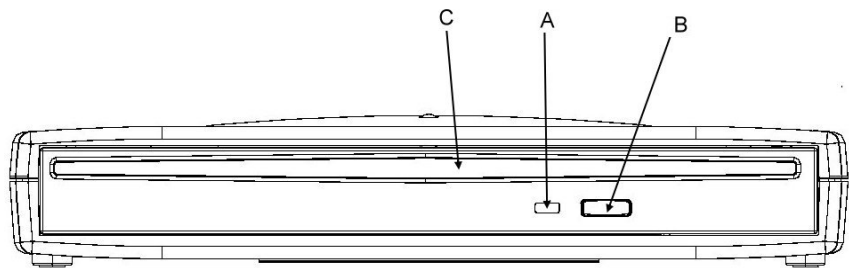


Figure: Front view of slot-in type drive

<b>A</b>	<b>Busy / Write LED</b>	Indication of drive's operation status. The light lit stands for Busy; the light blinking stands for Write/Rewrite.
<b>B</b>	<b>Eject Button</b>	Push button to eject the disc.
<b>C</b>	<b>Disc Slot</b>	The slot to insert the disc in.

Rear View



Figure: Rear view of the Drive

<b>A</b>	<b>Power Connector</b>	For DC power input.
<b>B</b>	<b>USB Connector</b>	Mini type USB B type jack.

*Note: Because the bundled USB cable and Power adapter are designed for this drive, please connect ONLY using those accessories bundled in this package. Accessories other than those bundled may cause fatal damage to this drive.*

Top View

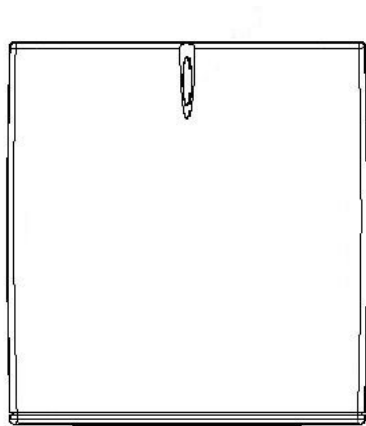


Figure: Top view of the drive

<b>LED Indicator</b>	Indication of drive's connection status. The Green light will come on only when both the power plug and USB plug are connected properly.
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## USB 2.0 USERS

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USB 2.0 is a very new technology. Therefore, most computers do not have native support for USB 2.0. You must install a USB 2.0 adapter card for your External drive to run at USB 2.0 speeds. If you do not have a USB 2.0 card installed, this drive will still work connected to a standard USB 1.1 connection, but the speed will be limited to USB 1.1 speed. After installing a USB 2.0 adapter card, follow the steps below for your operating system to verify the USB 2.0 card is installed properly.

### **Windows® 2000/XP users:**

Right click My Computer and select Properties.

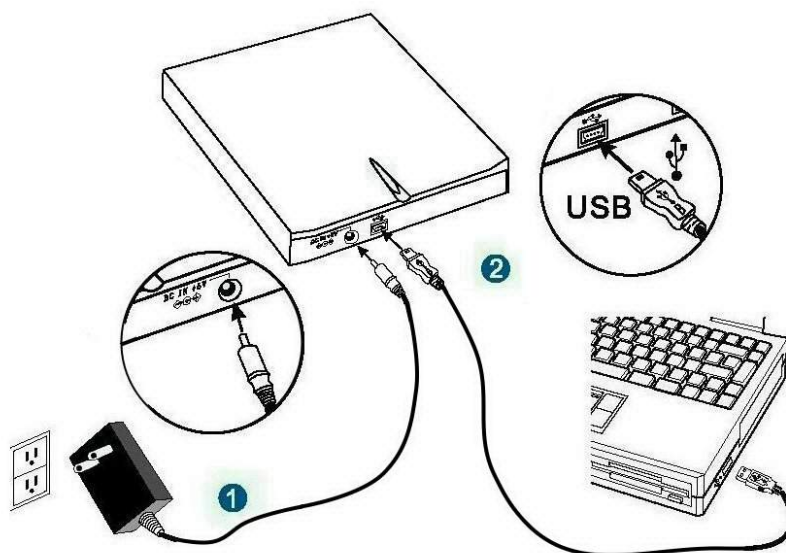
Select the hardware tab.

Click the Device Manager button.

If there is a yellow exclamation point next to Universal Serial Bus Controllers, contact the card's manufacturer for help.

## CONNECTION

1. Connecting Power Supply Cable.
2. Connecting Hi-Speed USB 2.0 Cable.



## INSTALLING THE DRIVE

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**Before you start, please make sure you have installed the proper software for Recording CDs, DVDs and Playing DVDs. The Recording software and the DVD Playback software are in different CD kits included in the package.**

1. **Start your computer. Wait for the operating system to load, then insert the CD kit. Follow the instructions on the screen to install the software for Recording CDs, DVDs or Playing DVDs you wish to install from the CD kit.**
2. **Connect the power supply to the drive.**  
(To prevent damage to the power plug, connect carefully to avoid bending the power plug.)
3. **Attach the included Hi-Speed USB cable mini B type plug to the drive.**  
(Examine the connection carefully for the correct orientation.)
4. **Connect the A type plug end of the Hi-Speed USB cable to the USB 2.0 adapter card connection on your computer. The drive is ready to use.**

(NOTE: The green power light on top of the drive will come on only when both of the power supply and USB cable are connected properly.)

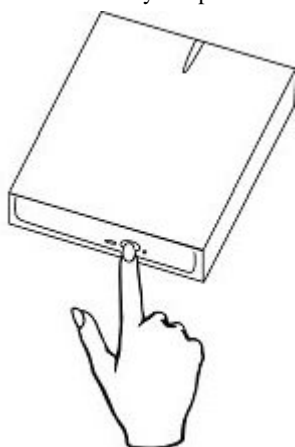
(NOTE: If you cannot identify the USB 2.0 connection, refer to the documentation of your USB 2.0 card. If you do not have a USB 2.0 adapter card installed, you can still connect the drive to a standard USB 1.1 connection.)

## OPERATION (A)-FOR TRAY TYPE DRIVE

Operate your drive only in a horizontal position. If you operate it in a vertical orientation, you may damage the disc or the drive if the drive falls over.

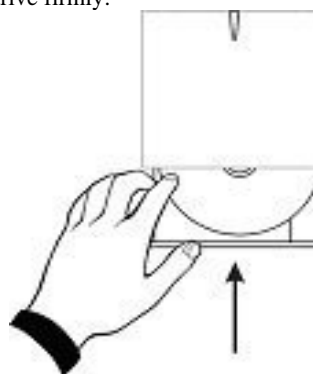
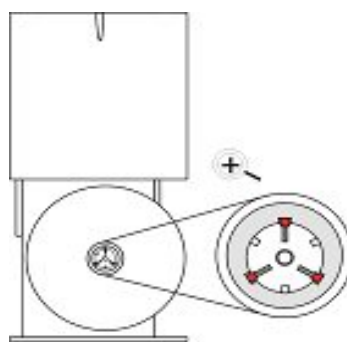
### To Put a Disc in the Tray

1. While the drive is powered, push the eject button on the front panel. The disc tray slides out in a few seconds.
2. Pull the disc tray to open it all the way.



3. Lay a disc with the label facing up in the tray. Press the center of the disc to secure it to the drive spindle.

4. Push back the tray until the tray is locked to the drive firmly.

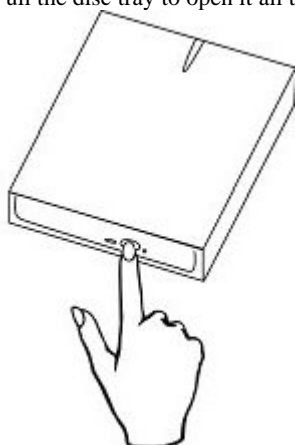


**Note:** Do not apply too much pressure when loading onto your tray, as it may damage the drive. And be careful not to touch the drive's pickup lens.

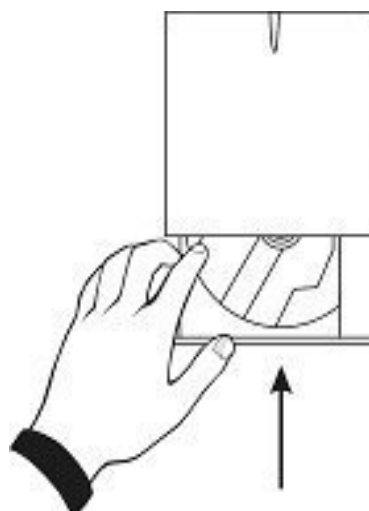
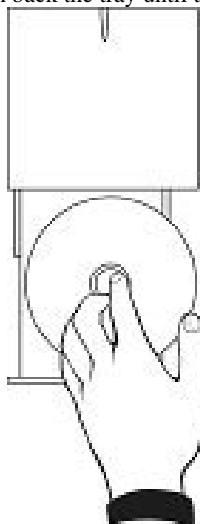
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### To Remove a Disc from the Tray

1. Push the eject button on the front panel.
2. Pull the disc tray to open it all the way.



3. Remove the disc by applying a finger to the center of the drive spindle, while lifting the edge of the disc with your thumb.
4. Push back the tray until the tray is locked to the drive firmly.



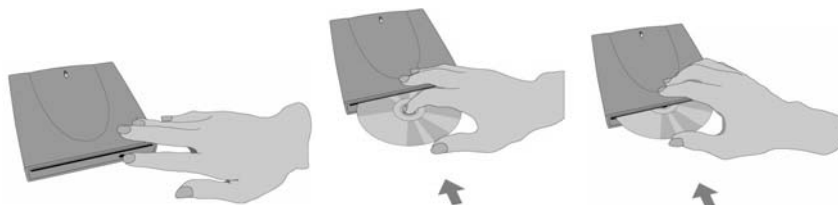
***Note: Always close the tray by pressing the front of the drawer by hand in a smooth and secure manner.***

## OPERATION (B)-FOR SLOT-IN TYPE DRIVE

Operate your drive only in a horizontal position. If you operate it in a vertical orientation, you may damage the disc or the drive if the drive falls over.

### To Insert a Disc into the Drive

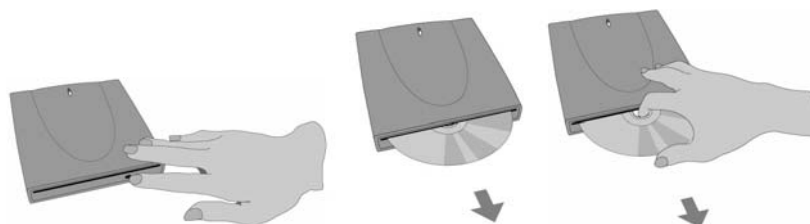
1. While the external drive is powered, push the eject button on the front panel to check whether a disc is inside the drive or not. The disc slides out in a few seconds if it is inside the drive.
2. Hold the disc by the center hole and the disc edge with your fingers (the disc label side is facing up.) Properly insert the disc edge into the disc slot on the front panel, push the disc into the drive with your thumb, then the disc will automatically slide into the drive and get ready.



**Note:** Do not attach paper labels to the disc. Attaching a label to the disc may create an imbalance. This will result in reading or writing errors. And the disc with paper labels may easily be stuck in the drive.

### To Remove a Disc from the Drive

1. Push the eject button on the front panel, and the disc will slide out from the disc slot in a few seconds.
2. Hold the disc by the center hole and the disc edge with your fingers, and then draw out the disc from the disc slot.





## RECORDING CDs & DVDs









**Before you start, please make sure you have installed the proper software for Recording CDs, DVDs and Playing DVDs. The Recording software and the DVD Playback software are in different CD kits included in the package.**





### About Software & Manuals

The included software is to give you the best result with ease of use. The detailed user's manual for the recording and playback software will be automatically installed into your computer when you install the recording software. For details on other software packages that are available for writing DVDs or CDs, please visit the web sites of the companies whose software you are interested in, refer to their user's manual, or look at the help option within the software. Please refer to the user's manual for the detailed operation procedures.

### Recommended Recordable & ReWritable Media

Some CD media or DVD media may not be possible to write on, due to differences in the manufacturing quality. We recommend you use CD and DVD media from the following manufacturers that have been proven satisfactory with our drive.

CD-R Media:		AMT, CMC, Csita, Delphi, EverMedia, LeadData(Silver-Sil), Maxell, Mitsubishi(Bagdad), Mirage, Mitsui, MoserBaer(India), MPO, NanYa, Plasmon, Prodisc, RAMedia, Ricoh, Ritek, SAST, SKC(Korea), TDK, Taiyo-Yuden(DX dye)
Low Speed CD-RW Media:		AMT, CdBoss, CMC, DataStone, Ever Media, Gigadata, GigaStor, Maxell, MCW, Mitsubishi, Philips, Pony, Power, Princo, Ricoh, Ritek, TetaSys, Verbatim, Winner
High Speed CD-RW Media:		AMT, CMC, Infodisc, Mitsubishi, NanYa, Postech, Prodisc, Ricoh, Ritek, SKC(Korea)
Ultra Speed CD-RW Media:		CMC, Mitsubishi, Ritek
DVD-R Media:		BeAll, CMC, Daxon, DVSN, Fornex, GSC, Imation, LeadData, Maxell, Mitsubishi, NanYa, Pioneer, Princo, Prodisc, Ritek, SKC(Korea), Sony, That's
DVD-R9 Media:		MKM
DVD-RW Media:		CMC, Mitsubishi, Princo, Ritek
DVD-RAM Media:		Maxell, Panasonic

DVD+R Media:		BeAll, CMC, Maxell, MBI, Mitsubishi, Philips, Prodisc, Ricoh, Ritek, Sony, TDK, Taiyo-Yuden
DVD+R9 Media:		Mitsubishi
DVD+RW Media:		CMC, Mitsubishi, Philips, Ricoh, Ritek
LightScribe Media		CD-R: HP, CMC, MCC, MBI DVD+R: HP, CMC, MCC, MBI

- NOTE:** (1) Only when your drive supports Double Layer DVD+R writing can write DVD+R9 media; and only when your drive supports Dual Layer DVD-R writing can write DVD-R9 media. Only when your drive supports DVD-RAM reading or rewriting, it can read or write to DVD-RAM media.
- (2) The drive's maximum Writing, ReWriting, & Reading speeds are printed on the original box.
- (3) Subject to change without further notice.

## PLAYING CDs & DVDs

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**This drive will not work alone while applying CDs & DVDs Playback!!  
The Playback function can only work when the USB Cable between the  
drive and your PC is well connected.**

### Playback Software

You must install the DVD playback software to your computer first. If you do not have any DVD playback software installed in your computer, the included DVD playback software in the CD kit will bring you the best playback result.

You can immediately play Audio CDs and pre-recorded DVD discs, including movies and other DVDs. To play a CD or a Digital Video Disc (DVD), insert the disc with the label up (for CDs). This drive plays both single-layer and dual-layer DVDs.

### The First Time to Play DVDs

A code on some DVDs allows them to be played only in a certain regional area, such as North America, Europe, etc. When the drive ships, there is no region code set. The first time a DVD that has a region setting is inserted into the drive, the act of inserting the DVD sets the drive to that region code.

If you later insert a DVD with a different region code, you are prompted to either accept changing the region code or not. If you do not accept the change, then that DVD will not play. If you do accept the change, then the drive's region code setting is changed. **But remember: you may change the drive's region code only 5 times. After that, you will not be able to change your drive's code setting.**

## LIGHTSCRIBE USER GUIDE

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The following LightScribe chapters are instruction for which support LightScribe disc labeling drive. Please refer to your drive's original package to verify if your drive supports LightScribe disc labeling function.



*Figure: LightScribe Logos*

### How to use LightScribe

To label your CDs and DVDs with LightScribe, you need three components:

- Your LightScribe-enabled drive
- LightScribe labeling software (included with your drive; other LightScribe-enabled applications are also available)
- LightScribe media (available where computers are sold)

You can label your LightScribe disc before or after you burn the data side, and you can even label a number of discs in succession, whether or not you've already recorded data on them.

The important thing to remember is to always insert your LightScribe disc label side down when burning your LightScribe.

## CREATING AND BURNING LIGHTSCRIBE-LABELED DISCS

1. Start the LightScribe labeling software.  
Your labeling application may be part of your disc-burning software, or it may be a stand-alone application.
2. Choose the appropriate LightScribe setting(s) for your design.  
Most LightScribe-enabled labeling applications require you to select the “LightScribe” option before designing your label.
3. Create your label design.
  - You can choose to create a label with text and/or graphics, and you can choose the area of the disc in which your label will be inscribed — from a simple band of text (“title only”) to a complete design that covers the entire disc (“full label”).
  - Experiment with text, fonts, ready-made backgrounds, and your own photos and graphics to design the label that best suits your style. (For ideas and advice, visit [www.lightscribe.com/labeltips](http://www.lightscribe.com/labeltips))
4. When your design is ready, insert a blank LightScribe disc into the drive label side down.  
Before you can preview or print your design, the labeling application checks to see whether there’s a LightScribe disc inserted correctly in the drive; if there is no disc, or if your disc is not inserted with the LightScribe labeling side down, the software will send an error message.
5. Select the Preview option to see how your design will look as a LightScribe label.  
Previewing your design lets you determine whether the design elements are placed where you want them, and it shows you what the grayscale design will look like on disc.
6. Select the Print option to send the label design to disc.  
When you print your design to disc, you can choose from three quality modes: draft, normal, or best. “Draft” is the fastest printing mode, and the resulting design provides a lower level of contrast; “best” provides the highest contrast and darkest design areas, and the burning process takes longer. The following table shows a rough estimation of the expected print times.

Setting	Title only	Title & content listing	Full label (with graphics)
Best	<4 min.	<9 min.	<36 min.
Normal	<3 min.	<7 min.	<28 min.
Draft	<2 min.	<4 min.	<20 min.

When your label is finished, the drive will automatically eject your disc.

## FREQUENTLY ASKED QUESTIONS

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**Q: How does LightScribe work?**

A: The coating on a LightScribe disc changes color when it's exposed to the CD/DVD drive's laser. The process is similar to film exposure, except that the LightScribe surface reacts specifically to the intense light of the laser.

**Q: What happens if I try to use LightScribe to label a non-LightScribe disc?**

A: The software prevents you from sending a label image to a non-LightScribe disc. LightScribe-enabled software is designed to recognize a LightScribe disc from the identification features embossed on it, and the system creates an image and sends it to the drive only if the appropriate media is inserted.

**Q: Can I use my computer for other things while the LightScribe label is burning?**

A: Yes. The labeling process runs in the background, so the PC can be used for other tasks while the labeling process is underway.

**Q: Can I leave my computer unattended while the LightScribe label is burning?**

A: Yes. LightScribe presents no tasks that require the user's attendance during the burning process. In addition, a LightScribe system will not go into "sleep" or power-save mode while it is burning a label.

**Q: Can I rewrite a LightScribe label, the way I can rewrite a CD-RW or DVD±RW disc?**

A: No. The current LightScribe technology is not erasable. Once the image is burned, it's permanent.

**Q: Will the LightScribe image cause imbalance when the CD or DVD is spinning in the drive, the way a paper label can?**

A: No. A LightScribe disc is as evenly balanced as any high-quality CD or DVD, and it spins evenly within the drive. Burning an image onto the disc does not change its balance and does not endanger the disc's ability to spin properly.

**Q: Does the LightScribe imaging process emit any hazardous chemicals?**

A: No. The laser imaging process initiates a chemical change in the colorant material embedded in the disc coating, but no hazardous chemicals are created or emitted during the process.

**Q: Is the LightScribe disc hot or dangerous to handle immediately after the label is burned?**

A: No. Although the terms "burning data" and now "burning an image" are standard in the industry, there is no appreciable temperature change involved in either process. A CD or DVD is safe to touch immediately upon ejection from the drive.

**Q: Can LightScribe create a label in color?**

A: Currently LightScribe technology is available only in grayscale, creating an image that resembles a black-and-white photograph. LightScribe's development strategy does include future announcements about additional capabilities; however, business and legal requirements prevent publication of more specific information at this time.

## TROUBLESHOOTING

If you meet any trouble during installation or normal use of your drive, please refer to the following information.

### Read Problems

Symptom	Possible Causes	Solutions
No operation.	No power.	<ul style="list-style-type: none"> <li>Check if the power cord is connected securely to the connector.</li> </ul>
	USB cable isn't connected properly.	<ul style="list-style-type: none"> <li>Ensure that the USB cable and connectors are not damaged, bent or dented. Check especially the pins.</li> </ul>
No drive recognition.	Power is not switched on.	<ul style="list-style-type: none"> <li>Check if LED of your drive is lit. If not, there is no power.</li> </ul>
	USB cable is not connected properly between the computer USB port and the drive.	<ul style="list-style-type: none"> <li>Ensure that both connectors of the USB cable is properly connected to the USB ports on the computer and the drive.</li> </ul>
	USB drive is not recognized by the Windows Operating System.	<ul style="list-style-type: none"> <li>Please refer to the USB 2.0 Users chapter and check if the USB driver is installed properly.</li> </ul>
Excessive noise when reading.	Eccentric disc loaded.	<ul style="list-style-type: none"> <li>Replace it with another one.</li> </ul>
	Seal attached on the surface	<ul style="list-style-type: none"> <li>Detach the seal very carefully. Don't make any scratches.</li> </ul>
Cannot open the tray (Eject).	Eject locked by software.	<ul style="list-style-type: none"> <li>Stop the applying software and try the eject button to open the tray.</li> </ul>
	CD set incorrectly.	<ul style="list-style-type: none"> <li>Insert a small stick or paper clip into this hole to eject the tray.</li> </ul>
<ul style="list-style-type: none"> <li>Cannot read the former session of the CD-RW disc which has been written at least twice.</li> <li>Read error occurs.</li> </ul>	"Load Contents" or "Import Session" was NOT clicked on the Software.	<ul style="list-style-type: none"> <li>If recorded without checked "Load Contents" or "Import Session", it is impossible to read. But when using utility software such as "Session Selection" from Adaptec, the former session can be read.</li> </ul>
	Defective disc.	<ul style="list-style-type: none"> <li>Deep scratches, fingerprints or other contaminants on the discs surface can disable the drive from reading data. Always keep it clean.</li> </ul>
	Music CD inserted.	<ul style="list-style-type: none"> <li>Because audio compact discs do not have computer data, typing computer commands while an audio CD is in your drive will result in an error message.</li> </ul>
	Disc inserted upside down.	<ul style="list-style-type: none"> <li>Remove the disc from tray and reinsert it with the label side up.</li> </ul>

## Write Problems

Symptom	Possible Causes	Solutions
Cannot write.	Using other authoring software which does not support your drive.	<ul style="list-style-type: none"> <li>Use the authoring software provided with the drive. When using other software, ensure your drive is supported by contacting the software supplier.</li> </ul>
	Disc inserted upside down.	<ul style="list-style-type: none"> <li>Reinsert the disc with label side up.</li> </ul>
	Short of Hard Disk capacity.	<ul style="list-style-type: none"> <li>Generally 1.2 to 2 times the size of the write data is required. This may vary according to the write method.</li> </ul>
	No power.	<ul style="list-style-type: none"> <li>Check if the power cord is securely connected to the connector.</li> </ul>
	USB cable isn't connected properly.	<ul style="list-style-type: none"> <li>Ensure that the USB cable and connectors are not damaged, bent or dented. Check especially the pins.</li> </ul>
Writing errors occur (Buffer under-runs).	<ul style="list-style-type: none"> <li>Network used.</li> <li>Window screen saver activated while writing.</li> <li>Other application running.</li> </ul>	<ul style="list-style-type: none"> <li>When running saver or other applications or writing in a network environment, errors may occur due to lack of CPU resources in PC.</li> <li>Rewrite after log-off from the network.</li> <li>Deactivate the screen saver or power saving mode.</li> <li>Quit other applications other than the authoring software.</li> </ul>
	Short of PC memory.	<ul style="list-style-type: none"> <li>Due to shortage of main memory in PC, swapping of hard disc space may have occurred. If swapped, data from the hard disc may cut off causing buffer under-runs.</li> <li>Increase main memory capacity.</li> </ul>
	"Auto thermal re-calibration" triggered.	<ul style="list-style-type: none"> <li>Disable "Auto thermal re-calibration" in the BIOS setup.</li> <li>Use another Hard Disk if can not disable it.</li> </ul>
	Defective DVD/CD media.	<ul style="list-style-type: none"> <li>DVD/CD media may be dirty, scratched or damaged. Rewrite on another DVD/CD media.</li> </ul>
	Short of Hard Disk capacity.	<ul style="list-style-type: none"> <li>Generally 1.2 to 2 times the size of the write data is required. This may vary according to the write method.</li> </ul>
No drive recognition.	USB cable is not connected properly between the computer USB port and the drive.	<ul style="list-style-type: none"> <li>Ensure that both connectors of the USB cable is properly connected to the USB ports on the computer and the drive.</li> </ul>



Symptom	Possible Causes	Solutions
	USB drive is not recognized by the Windows Operating System.	<ul style="list-style-type: none"> <li>Please refer to the USB 2.0 Users chapter and check if the USB driver is installed properly.</li> </ul>
	Using other authoring software which does not support your drive.	<ul style="list-style-type: none"> <li>Use the authoring software provided with your drive. When using other software, ensure your drive is supported by contacting the software supplier.</li> </ul>
Can not write at highest speed.	DVD/CD media not compatible with highest speed.	<ul style="list-style-type: none"> <li>Use the highest speed compatible discs or write with lower speed.</li> </ul>
	Buffer under-run occurs.	<ul style="list-style-type: none"> <li>Refer to the "Buffer under-run" item.</li> </ul>
	Defective DVD/CD media.	<ul style="list-style-type: none"> <li>DVD/CD media may be dirty, scratched or damaged. Rewrite on another DVD/CD media.</li> </ul>
	Using other authoring software not bundled with your drive.	<ul style="list-style-type: none"> <li>Use the authoring software provided with your drive. When using other software, ensure your drive is supported by contacting the software supplier.</li> </ul>

